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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,570	02/27/2004	Paul J. Gasloli	OC0336US	9111
22849	7590	07/20/2004	EXAMINER	
SCOTT W HEWETT 400 WEST THIRD STREET #223 SANTA ROSA, CA 95401			BOUSIKARIS, LEONIDAS	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/788,570

Applicant(s)

GASLOLI ET AL.

Examiner

Leo Boutsikaris

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) 23 is/are allowed.
- 6) ☐ Claim(s) 1,2,5,6,8-11,13,16,21 and 22 is/are rejected.
- 7) ☐ Claim(s) 3,4,7,12,14,15 and 17-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/27/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 10, 12 are objected to because of the following informalities:

In claim 10, line 2, the word "is" needs to be inserted after "range" for better clarity.

Claim 12 inherits the deficiency of claim 10 from which it depends.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-6, 8-11, 13, 16, 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Bartolomei (US 3,981,568).

Regarding claim 1, Bartolomei discloses a dichroic filter comprising (Fig. 11):

a substrate 21;

a plurality of dielectric thin film layers 37, 31, 43 disposed on the substrate to provide a spectral response having (see Fig. 12B):

a first highly reflective region (wavelength less than approximately 600 nm),

a second highly reflective region (wavelength greater than approximately 660 nm); and

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a transmissive region between the two highly reflective regions having a selected neutral density transmission across a selected range of at least 25 nm (lines 36-47, col. 5, and line 23, col. 7 to line 7, col. 8).

It is noted that since the filter is dichroic, the amount of reflectivity is complementary (modulo 100%) of that of the transmission. Furthermore, the claim language does not specify the amount of ripple, therefore, the transmission across the 500-700 nm region is substantially constant, i.e., the filter exhibits neutral density transmission characteristics.

Regarding claim 2, the ripple in the selected wavelength region is less than 20% of an average transmission (20% of 72.5% being 14.5%).

Regarding claim 5, the selected transmission range is within the visible spectrum.

Regarding claim 6, both highly reflective regions are in the visible region.

Regarding claim 8, both highly reflective regions are more than 100 nm wide.

Regarding claim 9-11, the selected transmission range is at least 50 nm, and about 100 nm.

Regarding claim 13, the plurality of thin layers include a portion 31 reflecting R and G light, i.e., a long stop filter, and a portion 37 reflecting B and G, i.e., a short stop filter (lines 36-45, col. 5).

Regarding claim 16, the transmission region has a 50% width that is less than the selected wavelength range.

Regarding claim 21, the spectral characteristics of the filter are chosen according to the application, i.e., the type of the illuminant used in conjunction with the filter (lines 16-41, col. 6).

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Regarding claim 22, each reflective region has leakage, and the average transmission in the selected region between the two reflective regions is about between 75% and 96.5%.

Allowable Subject Matter

Claims 3-4, 7, 12, 14-15, 17-20, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 23 is allowed.

Claims 3-4, 7, 12, 14-15, 17-20, 23 are allowable over the prior art of record for at least the reason that even though the prior art discloses dichroic neutral density filters, the prior art fails to teach or reasonably suggest, regarding claim 3, a dichroic neutral density filter having the claimed average transmission in the selective wavelength region, regarding claim 4, a dichroic neutral density filter having transmission varying less than $\pm 2.5\%$, regarding claim 7, a dichroic neutral density filter where the at least one of the highly reflective regions is about 100 nm wide, regarding claim 12, a dichroic neutral density filter wherein the neutral density transmission is in the claimed range in the green portion of the spectrum, regarding claims 14-15, a dichroic neutral density filter wherein the long stop filter is disposed between the substrate and the short stop filter, regarding claims 17-20, a dichroic neutral density filter wherein at least one of the highly reflective regions has leakage in the claimed region, and regarding claim 23, a dichroic neutral density filter, wherein the neutral density factor is in the claimed range, as set forth by the claimed combination.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Leo Boutsikaris whose telephone number is 571-272-2308.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Leo Boutsikaris, Ph.D.
Patent Examiner, AU 2872
July 15, 2004

